

Northeast Wisconsin Forest Health Update

June 16, 2012

Topics covered this month:

Insects:

Aphids on maple
EAB
EAB quarantine info for WI
Elm spanworm defoliation
Gypsy moth
Larch casebearer
Rose chafer
Spittlebug populations high
Spruce budworm
White grubs
Wool sower gall
Yellowheaded spruce sawfly
And a few miscellaneous insects

Other:

Organizational changes
Pollen cones on balsam fir
Wind damage on basswood mimics thrips damage
Wind damage on oak mimics tatters

Diseases:

Annosum guide and public hearings
Anthracnose and ash leaf drop
Hickory mortality



Forest tent caterpillar. Some areas of state are experiencing patchy defoliation from this native caterpillar.

Insects

*information and photos in this document from Linda Williams unless otherwise noted.

Aphids on maple – severe aphid infestations like this one in Manitowoc County can cause stunting of the leaves or premature leaf drop due to the feeding. The feeding on this tree was so heavy that all of the



leaves were coated with a sticky coating of honeydew (excretions)



Lacewing larvae (above left), sometimes called aphid lions, they feed on aphids. Photo by Mike Schuessler, who, when I told him this was one of the good guys, replied "oops, I already squashed it". ☺

Aphids on maple. The "wet" look to the leaves is from honeydew secreted by the aphids.

from the aphids). Control for yard trees can usually be accomplished with insecticides, or even just a strong spray of water. Or, there are numerous predators and parasites that feed on aphids so you can just let nature do its job.

Emerald Ash Borer (EAB) – from Bill McNee. On Wednesday, June 13 it was announced that EAB had been detected at two locations in Walworth County in southeast Wisconsin. One infestation is in the City of Lake Geneva, and the other is in a rural area about ½ mile north of the Illinois state line. More information can be found at: <http://datcp.wi.gov/news/?Id=594>.

EAB adult flight is now underway in virtually all of Wisconsin, with peak flight as far north as Madison. NE cities such as Oshkosh, Appleton and Green Bay are approaching the peak flight period. Suspicious beetles or symptomatic trees should be reported to the EAB hotline, 1-800-462-2803, or emailed to:

DATCPEmeraldAshBorer@wisconsin.gov.

EAB has been found at Great Smoky Mountains National Park in Tennessee. Adult beetles were found on two purple traps within the park earlier this month. EAB was already known to be present in the county. Here is a relevant quote from a May 2007 news article: “No one knows how many campers pack firewood from home, but rangers at Great Smoky Mountains National Park, which straddles the Tennessee-North Carolina border, found visitors last summer (2006) from quarantined areas of Michigan and Ohio arriving with firewood....” So far in 2012 EAB has been found in an additional seven eastern Tennessee counties.

Federal EAB quarantine rules are being simplified as of July 1, but Wisconsin will continue to have a state quarantine that restricts the importation of ash materials and hardwood firewood from areas outside Wisconsin where EAB is known to exist. The federal changes will have no significant effect on Wisconsin residents. For more information, read the DATCP news release at: <http://datcp.wi.gov/news/?Id=585>.

Please contact Linda or Bill if you see any purple EAB traps lying on the ground.

EAB quarantine info for Wisconsin - reprinted from the WI DNR ForesTREE reporter - Foresters in [emerald ash borer quarantined counties](#) may get questions from the forest industry about a change in the federal quarantine regulations. The USDA's Animal and Plant Health Inspection Service announced May 31st that as of July 1, 2012 it will no longer restrict movement of ash products across state boundaries if the products are moving within contiguous quarantined areas across the state line. The Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) will take up the role of enforcement of state boundaries to



Walworth County shown in red. Yellow counties had first EAB detections in 2011 or earlier.



UGA1241011

EAB adult on a penny. Photo from www.forestryimages.org

continue to prevent introduction of EAB into Wisconsin through infested nursery stock, unprocessed ash logs and hardwood firewood. Mills and other forestry businesses that had compliance agreements with APHIS to receive ash logs from out-of-state areas quarantined for EAB will now have similar agreements with Wisconsin DATCP. Ash products from an out of state EAB quarantined area will not be allowed into any Wisconsin county without a compliance agreement from WI DATCP.

If you get calls from forestry businesses about this switch, please direct them to [Christopher Deegan](mailto:Christopher.Deegan@datcp.wi.gov) (608-224-4573) at DATCP who can answer all their questions.

To read the press release put out by APHIS go to http://www.aphis.usda.gov/newsroom/2012/05/eab_quarantine.shtml

And check out DATCP's press release with information about our quarantines at <http://datcp.wi.gov/news/?Id=585>

Elm Spanworm defoliation – the northeast corner of Menominee County has some significant elm spanworm (*Ennomos subsignarius*) defoliation. I have not had a chance to do much of a survey for this pest in surrounding areas but it's on my "to do" list. Defoliation in the understory was severe and defoliation in the overstory was moderate. Although the name would seem to indicate that they prefer a specific host, they will actually feed on a variety of hardwoods, including elm, beech, maple, and ash. Pupation was already occurring as of June 12 in the areas of the Reservation that I was in, and there is



Elm spanworm pupae.

only one generation per year. Moths are white, and will emerge soon to mate and lay eggs. Caterpillars will be dark

(resembling a stick) during an

outbreak, but in lower populations you will find lighter green caterpillars.

Gypsy Moth – from Bill McNee. As of mid-June we are receiving occasional reports of gypsy moth caterpillars 1" and larger from the counties north of Green Bay, although the total number of reports is near a record low. Current hotspots are the Town of Stephenson (Marinette County) and the Bayfield area. No reports of tree defoliation have been



The various shades of elm spanworm caterpillars.



Gypsy moth caterpillar showing characteristic blue and red dots.

received, and to date I have received no gypsy moth nuisance complaints from the Green Bay area and south. Some pupation should already be occurring in the southern NER counties. With the warm and dry weather, survival should be very good and populations are likely to be higher in 2013.

Larch casebearer – moderate defoliation by larch casebearer is showing up in central Marinette County. Many of these areas had significant defoliation last year by larch casebearer. Scattered defoliation was also noted in northern Oconto County. Larch casebearer overwinters as a caterpillar and is able to start feeding early in the spring as soon as the weather warms up. They use a mined out needle as a protective house and appear as small tan pointy things on the needles of the tree. In cases of severe defoliation the tree will appear completely tan from a distance. Repeated defoliation can weaken the tree making it susceptible to attack by Eastern Larch Beetle. If you combine the stress of defoliation with other stressors, such as past years of drought, or late season flooding, it increases the likelihood of attack by Eastern Larch Beetle.



Defoliation by larch casebearer.

Rose chafer – rose chafer defoliation was reported from Brown, Marinette, and Door Counties. The last significant defoliation that I had noted from rose chafer was in 2005. These beetles feed on a wide variety of plants and prefer blossoms, but they will skeletonize leaves as well. Control is difficult because the adults are good fliers and can easily fly in from neighboring areas to re-infest your freshly sprayed plants. They are more common in areas with sandy soil where they can lay their eggs. The eggs will hatch into white grubs which live in the soil and feed on grass and weed roots. My books inform me that birds can die if they eat adult rose chafers because of a poison in the beetles that affects the heart of small, warm-blooded animals. For information on control check out the UW Extension pub <http://learningstore.uwex.edu/Assets/pdfs/A3122.pdf>



Rose chafer adult.

Spittlebug populations high – some spittlebug populations are particularly high this year. Spittlebug larvae suck plant juices and create a wet frothy mass around themselves for protection both from predators as well as from dehydration. Excess liquid (called honeydew) is excreted from the spittlebugs and will rain down, coating anything underneath. Sooty molds can grow on the honeydew. Significant populations of some spittlebugs (like Saratoga spittlebug) can cause damage to the fine twigs of trees, causing branch flagging.



Spittlebug on tamarack.

Spruce budworm – spruce budworm damage is showing up in some places in the northern region and reports have come in from Marinette County as well. Pupation has already occurred in most areas and as of June 16 moths were already emerging. The UP has had a spruce budworm outbreak going for a couple of years now but they observed less defoliation in 2011 than in 2010. Spruce budworm will defoliate spruce as well as balsam fir. Over-mature spruce, or spruce that was not thinned properly and is under stress, spruce with small crowns, or those that may not have recovered well from repeated droughty years, are particularly susceptible to topkill following a spruce budworm outbreak.



Significant defoliation by spruce budworm. Photo by Joe O'Brien.

White grubs –high white grub populations were reported from Marinette County, although there are probably more problem areas out there. White grubs are the larval stage of scarab beetles. White grubs feed on the roots of plants, some preferring tree roots, choosing to eat the fine roots and girdle some of the larger roots. This kind of damage can cause dieback and some mortality in young conifer plantations. There are survey protocols available which include a table with expected tree mortality related to the number of white grubs that you find per sample. If you would like a copy of this information so that you can do surveys for yourselves please contact me.



White grub. Photo from www.bugwood.org

Wool sower gall – a couple reports of this gall from Marinette County, and one from Waupaca County have filtered in. The wool sower gall, which occurs specifically on white oaks, is caused by a tiny gall wasp. These wasps are harmless to people. When the gall is pulled apart, inside are small things that look like seeds but these are what the wasp grubs develop in, and the fuzzy/felty part of the gall protects them from predators and parasites. There aren't usually enough of these on a single tree to cause any noticeable damage to the tree.



Wool Sower gall. Photo by Steve Kaufman.

Yellowheaded spruce sawfly - Yellowheaded spruce sawfly feed singly on the needles of spruce and can cause significant defoliation although it is usually patchy or limited to just a few trees or a few branches on the tree. Spruce growing in full sunlight are preferred, with white spruce being a favorite but they can feed on blue spruce and Norway spruce. With the early spring this year the sawflies were out earlier and I've noticed that about half have already pupated as of June 15 which is earlier than normal.

Sawflies are not a true caterpillar so Btk products labeled for use on caterpillars do not work for these critters,



Yellowheaded spruce sawfly.

general insecticides will need to be used if you want to control them with pesticides. For more information check out the USFS document on Yellowheaded Spruce Sawfly at <http://www.na.fs.fed.us/Spfo/pubs/gtr/sprucesawfly/cover.htm>

And finally, an assortment of other “cool bugs” that I’ve seen lately and photographed:



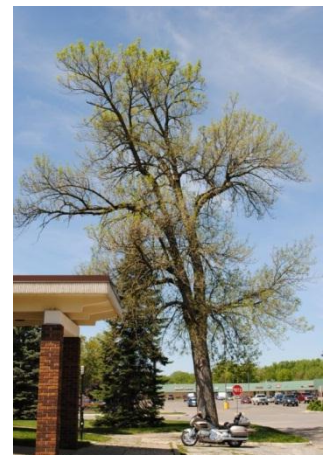
Insects above from L-R. 1 - Rosy maple moth, caterpillar is the greenstriped maple worm which occasionally has outbreaks with extensive defoliation, feeds on maples. 2 - White dotted prominent moth, caterpillar is a plump green critter called the green oak caterpillar that feeds on oak, birch, alder, and willow. 3 – EAB emerging from tree. 4 – willow leaf beetle larvae. 5 – blackheaded ash sawflies.

Diseases

Annosum guide and public hearings - information regarding the guide for annosum root rot is now on the web at <http://dnr.wi.gov/topic/ForestHealth/AnnosumRootRot.html> Information about the public listening sessions is posted at the top. Please note that there is a “GUIDE” tab added. You can obtain more information about the guide and public input process under the “GUIDE” tab. More info/documents will be added under the tab in the future.

For those of you planning to participate in the listening sessions please be aware that any comments you would like to make need to be in written format. You’re welcome to ask questions and make comments at the listening sessions but if you want your comments to count you must submit them in written format. Comments can be emailed directly to Kyoko at Kyoko.Scanlon@wi.gov or you can drop them off at the hearings.

Anthraxnose and ash leaf drop – for the last few years I’ve been reporting on ash trees that “purge” their leaves, dropping any that are damaged by frost or anthracnose early in the spring. This did occur this year as well, but the timing of the leaf drop coincided with some very windy days that we had, in particular a very windy day on May 20 seemed to be when many ash dropped their leaves, so reports coming in were actually minimal, perhaps because people thought the wind just whipped the leaves off the tree. Whether leaves were damaged on a tree or not depended a lot on the stage of leaf development at the time of the frost/freezes that we had, and at the time of any rain that could have promoted early anthracnose infections, so some trees were badly affected and others not so much. Ash trees seem to respond quite readily to this purging and send out a second set of leaves for the summer.



Ash that has dropped most of its leaves early in the spring. Photo by Chad Hoerth.

Hickory mortality – this problem continues. Reports of active decline and mortality have recently come in from east-central Marinette County and northern Oconto County. In what parts of your counties are you still seeing active mortality of the hickory? Let me know!

I first reported on a new sudden hickory mortality in 2005. The symptoms of trees with this problem start when trees are attacked by our native hickory bark beetle, then, at least one fungus seems to move into those areas where the bark beetles are attacking, crown decline begins, the tree sprouts epicormic branches in an attempt to stay alive, small bleeding spots may show up along the stem indicating cankers, the epicormic branches rapidly wilt and die and the tree is dead. This process, once started, seems to take 1-3 years on average. Info on some of the research findings of the US Forest Service researchers can be found at

<http://nrs.fs.fed.us/pubs/gtr/gtr-p-24%20papers/52juzwik-p-24.pdf> (2006 results)

http://fhm.fs.fed.us/posters/posters08/hickory_decline.pdf (2007 results)

Dr. Juzwik, who has been researching this issue, sent a partial summary of her 2009 research which I included in my December 2009 pest update, and have cut and pasted here:

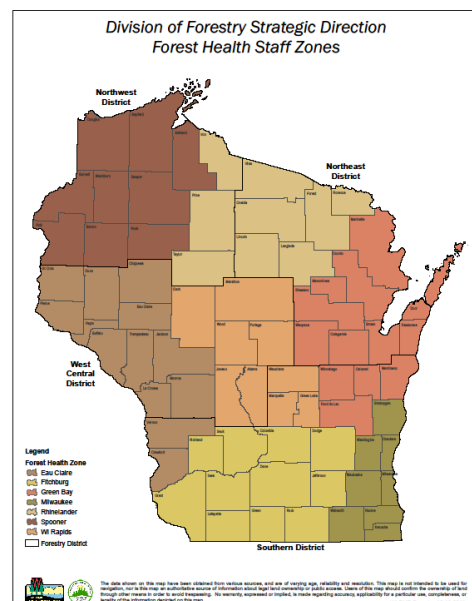
Conclusions to Date

Of the three most commonly observed scenarios associated with hickory decline/dieback and mortality of hickory, the relatively rapid crown decline associated with *S. quadrispinosus* and diffuse stem cankers was most prevalent based on field surveys conducted in six states. Coalescing larval galleries is not what is killing the affected hickory. Rather, it appears that either the coalescing of hundreds of stem lesions or cankers associated with beetle attacks is the cause. Preliminary results show *C. smalleyi* and *F. solani* are causes of these cankers. Other, as yet undetected, fungi may be involved. Further work is underway to test this hypothesis. However, control of hickory bark beetle is the key to managing hickory decline. Survey data suggests that reducing density of bitternut hickory in a stand may greatly reduce tree decline and mortality during bark beetle outbreaks. Sanitation is also recommended, but is difficult for landowners to accomplish.

Other/Misc.

Organizational changes – with the changes within the DNR forestry division from Regions to Districts, Areas, and Teams, you will see no changes in the areas of the state that the forest health staff cover. If you have previously worked with one of us in a county, you will still be working with that same forest health person. My region is shown in pinky/mauve color at right.

I'm unsure what my pest update will be called now since as of July 1 we will no longer have the Northeast Region, and if you look at the Northeast District both Brian Schwingle (Forest Health Specialist out of Rhinelander) and myself cover counties within the new



Northeast District. I'll have to come up with something catchy to rename the Northeast Region Forest Health Update, or maybe something more generic, we'll see.

Pollen cones on balsam fir – each year I get at least one sample of pollen cones in with the standard message of “what gall is this?”. This is not a strange question because there are definitely galls that can look similar to pollen cones! The pollen cones at right are from balsam fir.



Balsam fir pollen cones. Photo by Jack Houston.

Wind damage on basswood mimics thrips damage – this year there are many basswood around the region that were badly affected by wind. The damage to their leaves very much resembles what you might expect to see following thrips damage, with the leaves missing interveinal tissue, giving them a lacy look. The problem wasn't thrips though, it was wind whipping the leaves at a tender time of leaf expansion. A timely frost may have played some roll as well but I suspect it was mostly wind damage that caused this look.



Basswood leaves damaged by wind when leaves were emerging.

Wind damage on oak mimics tatters – similar to the basswood above, some oak leaves also were damaged by wind when the leaves were tender. These leaves now have an appearance that looks exactly like how I would expect a tree with oak tatters to look, but this year it's due to wind damage as the leaves were emerging and expanding.



Wind damage to oak leaves as they were expanding mimics tatters symptoms.

Report EAB:

by phone 1-800-462-2803

by email DATCPEmeraldAshBorer@wisconsin.gov

visit the website <http://emeraldashborer.wi.gov/>

Report Gypsy Moth:

by phone at 1-800-642-6684

by email dnrfrgypsymoth@wisconsin.gov

visit the website <http://www.gypsymoth.wi.gov/>

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Note: This pest update covers forest health issues occurring in Northeastern Wisconsin. This informal newsletter is created to provide up-to-date information to foresters, landowners, and others on forest health issues. If you have insect or disease issues to report in areas other than northeastern Wisconsin please report them to your local extension agent, state entomologist or pathologist, or area forest pest specialist.

Pesticide use: Pesticide recommendations contained in this newsletter are provided only as a guide. You, the applicator, are responsible for using pesticides according to the manufacturer's current label directions. Read and follow label directions and be aware of any state or local laws regarding pesticide use.